

REMARKS

The present application was filed on September 17, 1999 with claims 1 through 22. Claims 1 through 22 are presently pending in the above-identified patent application.

This response is submitted pursuant to 37 CFR §1.116 and should be entered. The response does not contain any amendments and asserts that all of the pending claims, i.e., claims 1-22, are in a form that is believed allowable, and, in any event, in a form suitable for appeal. It is believed that examination of the pending claims will not place any substantial burden on the Examiner.

In the Office Action, the Examiner rejected claims 1-22 under 35 U.S.C. §102(e) as being anticipated by Sayeed (United States Patent Number 6,594,320 B1).

Independent Claims 1, 7, 13 and 18

Independent claims 1, 7, 13, and 18 were rejected under 35 U.S.C. §102(e) as being anticipated by Sayeed. Regarding claims 1 and 7, the Examiner asserts that Sayeed discloses storing said differentially encoded symbols and one or more pilot tones to produce an analog signal centered at a desired carrier frequency (FIGS. 4A-C; col. 4, lines 36-60).

In the Response to Arguments section, the Examiner addressed Applicant's prior argument that Sayeed fails to teach storing pilot tones. The Examiner asserts, however, that in FIG. 4A, and col. 4, lines 38-42, discloses "storing a spectral null (pilot tone) with a zero complex value in the location 400 of the buffer 140."

Applicant submits, however, that a person of ordinary skill in the art would not equate a spectral null with a pilot tone. As understood by a person of ordinary skill in the art, a "tone" is a sinusoid of a particular frequency. See also, for example, www.wikipedia.org, where it is noted that a "pilot" is a signal, usually a single frequency, transmitted over a communications system. Thus, a pilot tone is a signal that conveys information. A "spectral null," on the other hand, is not a signal. A "spectral null" occurs when *nothing* is transmitted. While a "pilot tone" is a signal that conveys information, a "spectral null" is the lack of a signal.

Applicants thus reassert that Sayeed does **not** address the issue of *storing pilot tones*. As previously asserted, FIG. 4A does not indicate the existence of pilot tones, which a person of

ordinary skill in the art would expect to be indicated at the start of the 1st set of Na/2 sub-carriers 410 and at the start of the 2nd set of Na/2 sub-carriers 430. In addition, Applicants could find no disclosure or suggestion of *pilot tones* or of *storing pilot tones* in the text cited by the Examiner. Independent claims 1, 7, 13, and 18 require storing said differentially encoded symbols and **one or**
5 **more pilot tones** to produce an analog signal centered at a desired carrier frequency.

Thus, Sayeed does not disclose or suggest storing said differentially encoded symbols and one or more pilot tones to produce an analog signal centered at a desired carrier frequency, as required by independent claims 1, 7, 13, and 18.

Dependent Claims 2-6, 8-12, 14-17, and 19-22

10 Dependent claims 2-6, 8-12, 14-17, and 19-22 were rejected under 35 U.S.C. §102(e) as being anticipated by Sayeed.

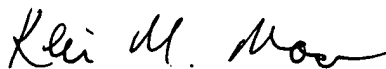
Claims 2-6, 8-12, 14-17, and 19-22 are dependent on claims 1, 7, 13, and 18, and are therefore patentably distinguished over Sayeed because of their dependency from independent claims 1, 7, 13, and 18 for the reasons set forth above, as well as other elements these claims add in
15 combination to their base claim.

All of the pending claims, i.e., claims 1 through 22, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the
20 telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



25 Date: January 31, 2006

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Pilot signal

From Wikipedia, the free encyclopedia.
(Redirected from Pilot tone)

In telecommunication, a **pilot** is a signal, usually a single frequency, transmitted over a communications system for supervisory, control, equalization, continuity, synchronization, or reference purposes.

In FM stereo broadcasting, a **pilot tone** of 19 kHz is used to indicate that there is stereophonic information on a subcarrier at 38 kHz (19×2 , the second harmonic of the pilot). If no pilot tone is present, then the 38 kHz (more often 39 kHz) subcarrier is not stereophonic information, and is used for other purposes. A guard band of ± 4 kHz (15-23 kHz) is used to protect the pilot tone from interference from the baseband audio signal (50 Hz-15 kHz), and from the lower sideband of the stereo subcarrier (23-53 kHz). The third harmonic of the pilot (19×3 , or 57 kHz) is used for Radio Data System.

In AM stereo, the bandwidth is too narrow to accommodate subcarriers, so the modulation itself is changed, and the pilot tone is subsonic (below the normal hearing range, instead of above it).

In color television, the color burst placed between each video field is the pilot signal to indicate that there are color subcarriers present.

In the NTSC television system, a pilot tone of 15.734 kHz is used to indicate the presence of MTS stereo:

In some analog video formats (Frequency modulation is standard method for recording the luminance part of the signal, and is used to record a composite video signal in Direct colour systems), e.g. Video 2000 and some Hi-band formats a pilot tone is added to the signal to detect and correct timebase errors.

Note: Sometimes it is necessary to employ several independent pilot frequencies. Most radio relay systems use radio or continuity pilots of their own but transmit also the pilot frequencies belonging to the carrier frequency multiplex system.

Source (in part): Federal Standard 1037C and MIL-STD-188

Retrieved from "http://en.wikipedia.org/wiki/Pilot_signal"

Category: Telecommunications terms

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pilot

pilot: 1. A signal, usually a single frequency, transmitted over a communications system for supervisory, control, equalization, continuity, synchronization, or reference purposes. *Note:* Sometimes it is necessary to employ several independent pilot frequencies. Most radio relay systems use radio or continuity pilots of their own but transmit also the pilot frequencies belonging to the carrier frequency multiplex system. 2. See **palm-top**.

These definitions were prepared by ATIS Committee T1A1. For more information on the work related to these definitions, please visit the ATIS website.

This HTML version of Telecom Glossary 2K was last generated on February 28, 2001. References can be found in the Foreword.
